



**ENVIRONMENTAL PROTECTION AGENCY**

[FRL-9738-8]

**Ambient Air Monitoring Reference and Equivalent Methods:**

**Designation of Three New Equivalent Methods**

AGENCY: Environmental Protection Agency.

ACTION: Notice of the designation of three new equivalent methods for monitoring ambient air quality.

SUMMARY: Notice is hereby given that the Environmental Protection Agency (EPA) has designated, three new equivalent methods, one for measuring concentrations of PM<sub>2.5</sub>, one for measuring concentrations of PM<sub>10</sub>, and one for measuring concentrations of PM<sub>10-2.5</sub> in the ambient air.

FOR FURTHER INFORMATION CONTACT: Robert Vanderpool, Human Exposure and Atmospheric Sciences Division (MD-D205-03), National Exposure Research Laboratory, U.S. EPA, Research Triangle Park, North Carolina 27711. E-mail: Vanderpool.Robert@epa.gov.

SUPPLEMENTARY INFORMATION: In accordance with regulations at 40 CFR Part 53, the EPA evaluates various methods for monitoring the concentrations of those ambient air pollutants for which EPA has established National Ambient Air Quality Standards (NAAQSs) as set forth in 40 CFR Part 50. Monitoring methods that are determined to meet specific requirements for adequacy are designated by the EPA as either reference methods or equivalent methods (as applicable), thereby permitting their use under 40 CFR Part 58 by States and other agencies for determining compliance with the NAAQSs.

The EPA hereby announces the designation of three new equivalent methods, one for measuring concentrations of  $PM_{2.5}$ , one for measuring concentrations of  $PM_{10}$ , and one for measuring concentrations of  $PM_{10-2.5}$  in the ambient air. These designations are made under the provisions of 40 CFR Part 53, as amended on August 31, 2011 (76 FR 54326- 54341).

The new equivalent methods are automated monitoring methods utilizing a measurement principle based on sample collection by filtration and analysis by beta radiation attenuation. The newly designated equivalent methods are identified as follows:

EQPM-0912-204, "Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System" and "SWAM 5a Dual Channel Monitor" configured for 1-hour measurements of PM<sub>2.5</sub> by beta attenuation, on either a single (Line A or B) or both sampling lines (Line A and B) simultaneously, using 47 mm glass fiber filters, at a sample flow set to 16.67 liters/min and software version 05-02.07.63 or later and with an inlet system comprised of a PM<sub>10</sub> pre-impactor inlet (based on European PM<sub>10</sub> inlet design) combined with a BGI VSCC™ PM<sub>2.5</sub> cyclone separator. Operated in accordance with the Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System Operation Manual.

EQPM-0912-205, "Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System" and "SWAM 5a Dual Channel Monitor" configured for 1-hour measurements of PM<sub>10</sub> by beta attenuation on a single sampling line (Line A or B, but not both together), with the standard, louvered US EPA PM<sub>10</sub> size selective inlet specified in 40 CFR 50 Appendix L, using 47 mm glass fiber filters, at a sample flow set to 16.67 liters/min and software version 05-02.07.63 or later. Operated in accordance with the Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System Operation Manual."

EQPM-0912-206, "Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System" and "SWAM 5a Dual Channel Monitor" configured for 1-hour measurements of PM<sub>10</sub> and PM<sub>2.5</sub> by beta attenuation, with the standard, louvered US EPA PM<sub>10</sub> size selective inlet specified in 40 CFR 50 Appendix L on one channel (Line A or B) and with an inlet system comprised of a PM<sub>10</sub> pre-impactor inlet (based on European PM<sub>10</sub> inlet design) combined with a BGI VSCC<sup>™</sup> PM<sub>2.5</sub> cyclone separator on the second channel (Line A or B, but always with PM<sub>10</sub> on the opposite Line). The PM<sub>10-2.5</sub> mass measurement is performed using the resultant subtraction of PM<sub>10</sub> minus PM<sub>2.5</sub>. Operated in accordance with the Teledyne Model 602 Beta<sup>PLUS</sup> Particle Measurement System Operation Manual.

Applications for the equivalent method determinations for these candidate methods were received by the EPA Office of Research and Development on April 16, 2012. The monitors are commercially available from the applicant, Teledyne Advanced Pollution Instrumentation, 9480 Carroll Park Drive, San Diego, CA 92121.

Test monitors representative of these methods have been tested in accordance with the applicable test procedures

specified in 40 CFR Part 53, as amended on August 31, 2011.

After reviewing the results of those tests and other information submitted in the applications, EPA has determined, in accordance with Part 53, that these methods should be designated as equivalent methods. The information in the applications will be kept on file, either at EPA's National Exposure Research Laboratory, Research Triangle Park, North Carolina 27711 or in an approved archive storage facility, and will be available for inspection (with advance notice) to the extent consistent with 40 CFR Part 2 (EPA's regulations implementing the Freedom of Information Act).

As designated equivalent methods, these methods are acceptable for use by states and other air monitoring agencies under the requirements of 40 CFR Part 58, Ambient Air Quality Surveillance. For such purposes, the methods must be used in strict accordance with the operation or instruction manuals associated with the methods and subject to any specifications and limitations (e.g., configuration or operational settings) specified in the applicable designated descriptions (see the identification of the methods above).

Use of the methods also should be in general accordance with the guidance and recommendations of applicable sections of the "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume I," EPA/600/R-94/038a and "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II, Ambient Air Quality Monitoring Program" EPA-454/B-08-003, December, 2008. Provisions concerning modification of such methods by users are specified under Section 2.8 (Modifications of Methods by Users) of Appendix C to 40 CFR Part 58.

Consistent or repeated noncompliance should be reported to: Director, Human Exposure and Atmospheric Sciences Division (MD-E205-01), National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

Designation of these new equivalent methods is intended to assist the States in establishing and operating their air quality surveillance systems under 40 CFR Part 58. Questions concerning the commercial availability or technical aspects of the methods should be directed to the applicant.

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